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Page 1

SEQUENCE LISTING

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CARR, Francis J.

<120> MODIFIED BRYODIN 1 WITH REDUCED  
IMMUNOGENICITY

<130> MER-134

<140> US/10/517,707

<141> 2004-12-10

<150> PCT/EP03/06055

<151> 2003-06-10

<150> EP 02012911.0

<151> 2002-06-11

<160> 183

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Lys	Thr	Phe	Leu	Pro	Ser	Leu	Ala	Thr	Ile	Ser	Leu	Glu	Asn	Asn	Trp
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Ser	Ala	Leu	Ser	Lys	Gln	Ile	Gln	Ile	Ala	Ser	Thr	Asn	Asn	Gly	Gln
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 Val Ala Val Asp Val  
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Ile	Thr	Asn	Ala	Ser	Ala	Arg	Val	Val	Thr	Ser	Asn	Ile	Ala	Leu	Leu
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Val Ser Phe Arg Leu Ser Gly Ala Thr Thr Thr Ser Tyr  
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<210> 11

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Phe Arg Leu Ser Gly Ala Thr Thr Thr Ser Tyr Gly Val  
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Thr Ser Tyr Gly Val Phe Ile Lys Asn Leu Arg Glu Ala  
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 Tyr Gly Val Phe Ile Lys Asn Leu Arg Glu Ala Leu Pro  
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<400> 14  
 Gly Val Phe Ile Lys Asn Leu Arg Glu Ala Leu Pro Tyr  
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 Val Phe Ile Lys Asn Leu Arg Glu Ala Leu Pro Tyr Glu  
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 Lys Asn Leu Arg Glu Ala Leu Pro Tyr Glu Arg Lys Val  
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Glu Ala Leu Pro Tyr Glu Arg Lys Val Tyr Asn Ile Pro  
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Leu Pro Tyr Glu Arg Lys Val Tyr Asn Ile Pro Leu Leu  
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Arg Lys Val Tyr Asn Ile Pro Leu Leu Arg Ser Ser Ile  
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Val Ala Val Asp Val Thr Asn Val Tyr Ile Met Gly Tyr  
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Val Asp Val Thr Asn Val Tyr Ile Met Gly Tyr Leu Ala  
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Thr Asn Val Tyr Ile Met Gly Tyr Leu Ala Gly Asp Val  
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Asn Val Tyr Ile Met Gly Tyr Leu Ala Gly Asp Val Ser  
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 Tyr Ile Met Gly Tyr Leu Ala Gly Asp Val Ser Tyr Phe  
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5

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&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

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&lt;400&gt; 50

Gly Asn Tyr Glu Arg Leu Gln Thr Ala Ala Gly Lys Ile

1

5

10

&lt;210&gt; 51

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

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&lt;400&gt; 51

Glu Arg Leu Gln Thr Ala Ala Gly Lys Ile Arg Glu Asn

1

5

10

&lt;210&gt; 52

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

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&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 52

Gly Lys Ile Arg Glu Asn Ile Pro Leu Gly Leu Pro Ala

1

5

10

&lt;210&gt; 53

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 53

Glu Asn Ile Pro Leu Gly Leu Pro Ala Leu Asp Ser Ala

1

5

10

&lt;210&gt; 54

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

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&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 54

Ile	Pro	Leu	Gly	Leu	Pro	Ala	Leu	Asp	Ser	Ala	Ile	Thr
1				5							10	

&lt;210&gt; 55

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 55

Leu	Gly	Leu	Pro	Ala	Leu	Asp	Ser	Ala	Ile	Thr	Thr	Leu
1				5						10		

&lt;210&gt; 56

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 56

Pro	Ala	Leu	Asp	Ser	Ala	Ile	Thr	Thr	Leu	Tyr	Tyr	Tyr
1				5						10		

&lt;210&gt; 57

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 57

Ser	Ala	Ile	Thr	Thr	Leu	Tyr	Tyr	Tyr	Thr	Ala	Ser	Ser
1				5						10		

&lt;210&gt; 58

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 58

Thr	Thr	Leu	Tyr	Tyr	Tyr	Thr	Ala	Ser	Ser	Ala	Ala	Ser
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 Ser Ala Leu Leu Val Leu Ile Gln Ser Thr Ala Glu Ser  
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<400> 63

Ala Leu Leu Val Leu Ile Gln Ser Thr Ala Glu Ser Ala  
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Leu Val Leu Ile Gln Ser Thr Ala Glu Ser Ala Arg Tyr  
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<220>

<223> Fragments of Bryodin 1

<400> 66

Val Leu Ile Gln Ser Thr Ala Glu Ser Ala Arg Tyr Lys  
1 5 10

<210> 67

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 67

Ala Arg Tyr Lys Phe Ile Glu Gln Gln Ile Gly Lys Arg  
1 5 10

<210> 68

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 68

Tyr Lys Phe Ile Glu Gln Gln Ile Gly Lys Arg Val Asp  
1 5 10

<210> 69

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 69

Lys Phe Ile Glu Gln Gln Ile Gly Lys Arg Val Asp Lys  
1 5 10

<210> 70

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 70

Gln Gln Ile Gly Lys Arg Val Asp Lys Thr Phe Leu Pro  
1 5 10

<210> 71

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 71

Lys Arg Val Asp Lys Thr Phe Leu Pro Ser Leu Ala Thr  
1 5 10

<210> 72

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 72

Lys Thr Phe Leu Pro Ser Leu Ala Thr Ile Ser Leu Glu  
1 5 10

<210> 73  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 73  
 Thr Phe Leu Pro Ser Leu Ala Thr Ile Ser Leu Glu Asn  
 1 5 10

<210> 74  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 74  
 Pro Ser Leu Ala Thr Ile Ser Leu Glu Asn Asn Trp Ser  
 1 5 10

<210> 75  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 75  
 Ala Thr Ile Ser Leu Glu Asn Asn Trp Ser Ala Leu Ser  
 1 5 10

<210> 76  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 76  
 Ile Ser Leu Glu Asn Asn Trp Ser Ala Leu Ser Lys Gln  
 1 5 10

<210> 77  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 77

Asn Asn Trp Ser Ala Leu Ser Lys Gln Ile Gln Ile Ala  
1 5 10

<210> 78

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 78

Ser Ala Leu Ser Lys Gln Ile Gln Ile Ala Ser Thr Asn  
1 5 10

<210> 79

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 79

Lys Gln Ile Gln Ile Ala Ser Thr Asn Asn Gly Gln Phe  
1 5 10

<210> 80

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 80

Ile Gln Ile Ala Ser Thr Asn Asn Gly Gln Phe Glu Ser  
1 5 10

<210> 81

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 81

Gly Gln Phe Glu Ser Pro Val Val Leu Ile Asp Gly Asn  
1 5 10

<210> 82

<211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 82  
 Ser Pro Val Val Leu Ile Asp Gly Asn Asn Gln Arg Val  
 1 5 10

<210> 83  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 83  
 Pro Val Val Leu Ile Asp Gly Asn Asn Gln Arg Val Ser  
 1 5 10

<210> 84  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 84  
 Val Val Leu Ile Asp Gly Asn Asn Gln Arg Val Ser Ile  
 1 5 10

<210> 85  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 85  
 Val Leu Ile Asp Gly Asn Asn Gln Arg Val Ser Ile Thr  
 1 5 10

<210> 86  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 86

Gln Arg Val Ser Ile Thr Asn Ala Ser Ala Arg Val Val  
 1 5 10

<210> 87  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 87  
 Val Ser Ile Thr Asn Ala Ser Ala Arg Val Val Thr Ser  
 1 5 10

<210> 88  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 88  
 Ala Arg Val Val Thr Ser Asn Ile Ala Leu Leu Leu Asn  
 1 5 10

<210> 89  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 89  
 Arg Val Val Thr Ser Asn Ile Ala Leu Leu Leu Asn Arg  
 1 5 10

<210> 90  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 90  
 Ser Asn Ile Ala Leu Leu Asn Arg Asn Asn Ile Ala  
 1 5 10

<210> 91  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 91

Ile Ala Leu Leu Leu Asn Arg Asn Asn Ile Ala Ala Ile  
1 5 10

<210> 92

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 92

Ala Leu Leu Leu Asn Arg Asn Asn Ile Ala Ala Ile Gly  
1 5 10

<210> 93

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 93

Leu Leu Leu Asn Arg Asn Asn Ile Ala Ala Ile Gly Glu  
1 5 10

<210> 94

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 94

Asn Asn Ile Ala Ala Ile Gly Glu Asp Ile Ser Met Thr  
1 5 10

<210> 95

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 95

Ala Ala Ile Gly Glu Asp Ile Ser Met Thr Leu Ile Gly  
1 5 10

<210> 96  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 96  
 Glu Asp Ile Ser Met Thr Leu Ile Gly Phe Glu His Gly  
 1 5 10

<210> 97  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 97  
 Ile Ser Met Thr Leu Ile Gly Phe Glu His Gly Leu Tyr  
 1 5 10

<210> 98  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 98  
 Met Thr Leu Ile Gly Phe Glu His Gly Leu Tyr Gly Ile  
 1 5 10

<210> 99  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 99  
 Asp Val Ser Phe Arg Leu Ser Gly Ala Thr Thr Thr Ser Tyr Gly  
 1 5 10 15

<210> 100  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1



<400> 100  
Phe Arg Leu Ser Gly Ala Thr Thr Thr Ser Tyr Gly Val Phe Ile  
1 5 10 15

<210> 101  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fragments of Bryodin 1

<400> 101  
Ser Gly Ala Thr Thr Thr Ser Tyr Gly Val Phe Ile Lys Asn Leu  
1 5 10 15

<210> 102  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fragments of Bryodin 1

<400> 102  
Thr Thr Thr Ser Tyr Gly Val Phe Ile Lys Asn Leu Arg Glu Ala  
1 5 10 15

<210> 103  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fragments of Bryodin 1

<400> 103  
Ser Tyr Gly Val Phe Ile Lys Asn Leu Arg Glu Ala Leu Pro Tyr  
1 5 10 15

<210> 104  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fragments of Bryodin 1

<400> 104  
Val Phe Ile Lys Asn Leu Arg Glu Ala Leu Pro Tyr Glu Arg Lys  
1 5 10 15

<210> 105  
<211> 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 105

Lys	Asn	Leu	Arg	Glu	Ala	Leu	Pro	Tyr	Glu	Arg	Lys	Val	Tyr	Asn
1				5					10					15

&lt;210&gt; 106

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 106

Arg	Glu	Ala	Leu	Pro	Tyr	Glu	Arg	Lys	Val	Tyr	Asn	Ile	Pro	Leu
1				5					10					15

&lt;210&gt; 107

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 107

Leu	Pro	Tyr	Glu	Arg	Lys	Val	Tyr	Asn	Ile	Pro	Leu	Leu	Arg	Ser
1				5					10					15

&lt;210&gt; 108

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 108

Glu	Arg	Lys	Val	Tyr	Asn	Ile	Pro	Leu	Leu	Arg	Ser	Ser	Ile	Ser
1				5					10					15

&lt;210&gt; 109

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 109

Val	Tyr	Asn	Ile	Pro	Leu	Leu	Arg	Ser	Ser	Ile	Ser	Gly	Ser	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1 5 10 15

<210> 110  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 110  
 Ile Pro Leu Leu Arg Ser Ser Ile Ser Gly Ser Gly Arg Tyr Thr  
 1 5 10 15

<210> 111  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 111  
 Leu Arg Ser Ser Ile Ser Gly Ser Gly Arg Tyr Thr Leu Leu His  
 1 5 10 15

<210> 112  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 112  
 Ser Ile Ser Gly Ser Gly Arg Tyr Thr Leu Leu His Leu Thr Asn  
 1 5 10 15

<210> 113  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 113  
 Gly Ser Gly Arg Tyr Thr Leu Leu His Leu Thr Asn Tyr Ala Asp  
 1 5 10 15

<210> 114  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 114

Arg	Tyr	Thr	Leu	Leu	His	Leu	Thr	Asn	Tyr	Ala	Asp	Glu	Thr	Ile
1				5				10						15

&lt;210&gt; 115

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 115

Leu	Leu	His	Leu	Thr	Asn	Tyr	Ala	Asp	Glu	Thr	Ile	Ser	Val	Ala
1			5					10						15

&lt;210&gt; 116

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 116

Leu	Thr	Asn	Tyr	Ala	Asp	Glu	Thr	Ile	Ser	Val	Ala	Val	Asp	Val
1			5					10						15

&lt;210&gt; 117

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 117

Tyr	Ala	Asp	Glu	Thr	Ile	Ser	Val	Ala	Val	Asp	Val	Thr	Asn	Val
1				5					10					15

&lt;210&gt; 118

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 118

Glu	Thr	Ile	Ser	Val	Ala	Val	Asp	Val	Thr	Asn	Val	Tyr	Ile	Met
1				5					10					15

&lt;210&gt; 119

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 119

Ser	Val	Ala	Val	Asp	Val	Thr	Asn	Val	Tyr	Ile	Met	Gly	Tyr	Leu
1				5					10					15

&lt;210&gt; 120

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 120

Val	Asp	Val	Thr	Asn	Val	Tyr	Ile	Met	Gly	Tyr	Leu	Ala	Gly	Asp
1				5					10					15

&lt;210&gt; 121

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 121

Thr	Asn	Val	Tyr	Ile	Met	Gly	Tyr	Leu	Ala	Gly	Asp	Val	Ser	Tyr
1				5					10					15

&lt;210&gt; 122

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 122

Tyr	Ile	Met	Gly	Tyr	Leu	Ala	Gly	Asp	Val	Ser	Tyr	Phe	Phe	Asn
1				5					10					15

&lt;210&gt; 123

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 123

Gly	Tyr	Leu	Ala	Gly	Asp	Val	Ser	Tyr	Phe	Phe	Asn	Glu	Ala	Ser
1				5					10					15

&lt;210&gt; 124

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 124

Ala	Gly	Asp	Val	Ser	Tyr	Phe	Phe	Asn	Glu	Ala	Ser	Ala	Thr	Glu
1				5					10					15

&lt;210&gt; 125

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 125

Val	Ser	Tyr	Phe	Phe	Asn	Glu	Ala	Ser	Ala	Thr	Glu	Ala	Ala	Lys
1				5					10					15

&lt;210&gt; 126

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 126

Phe	Phe	Asn	Glu	Ala	Ser	Ala	Thr	Glu	Ala	Ala	Lys	Phe	Val	Phe
1				5					10					15

&lt;210&gt; 127

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 127

Glu	Ala	Ser	Ala	Thr	Glu	Ala	Ala	Lys	Phe	Val	Phe	Lys	Asp	Ala
1				5					10					15

&lt;210&gt; 128

&lt;211&gt; 15

&lt;212&gt; PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 128

Ala	Thr	Glu	Ala	Ala	Lys	Phe	Val	Phe	Lys	Asp	Ala	Lys	Lys	Lys
1				5					10					15

<210> 129

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 129

Ala	Ala	Lys	Phe	Val	Phe	Lys	Asp	Ala	Lys	Lys	Lys	Val	Thr	Leu
1				5					10					15

<210> 130

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 130

Phe	Val	Phe	Lys	Asp	Ala	Lys	Lys	Lys	Val	Thr	Leu	Pro	Tyr	Ser
1				5					10					15

<210> 131

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 131

Lys	Asp	Ala	Lys	Lys	Lys	Val	Thr	Leu	Pro	Tyr	Ser	Gly	Asn	Tyr
1				5					10					15

<210> 132

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 132

Lys	Lys	Lys	Val	Thr	Leu	Pro	Tyr	Ser	Gly	Asn	Tyr	Glu	Arg	Leu
1				5					10					15

<210> 133

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 133

Val	Thr	Leu	Pro	Tyr	Ser	Gly	Asn	Tyr	Glu	Arg	Leu	Gln	Thr	Ala
1				5				10					15	

<210> 134

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 134

Pro	Tyr	Ser	Gly	Asn	Tyr	Glu	Arg	Leu	Gln	Thr	Ala	Ala	Gly	Lys
1				5				10					15	

<210> 135

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 135

Gly	Asn	Tyr	Glu	Arg	Leu	Gln	Thr	Ala	Ala	Gly	Lys	Ile	Arg	Glu
1				5				10					15	

<210> 136

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 136

Glu	Arg	Leu	Gln	Thr	Ala	Ala	Gly	Lys	Ile	Arg	Glu	Asn	Ile	Pro
1				5				10					15	

<210> 137

<211> 15

<212> PRT

<213> Artificial Sequence

<220>



<223> Fragments of Bryodin 1

<400> 137

Gln Thr Ala Ala Gly Lys Ile Arg Glu Asn Ile Pro Leu Gly Leu  
1 5 10 15

<210> 138

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 138

Ala Gly Lys Ile Arg Glu Asn Ile Pro Leu Gly Leu Pro Ala Leu  
1 5 10 15

<210> 139

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 139

Ile Arg Glu Asn Ile Pro Leu Gly Leu Pro Ala Leu Asp Ser Ala  
1 5 10 15

<210> 140

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 140

Asn Ile Pro Leu Gly Leu Pro Ala Leu Asp Ser Ala Ile Thr Thr  
1 5 10 15

<210> 141

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Fragments of Bryodin 1

<400> 141

Leu Gly Leu Pro Ala Leu Asp Ser Ala Ile Thr Thr Leu Tyr Tyr  
1 5 10 15

<210> 142

<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fragments of Bryodin 1

<400> 142  
Pro Ala Leu Asp Ser Ala Ile Thr Thr Leu Tyr Tyr Tyr Thr Ala  
1 5 10 15

<210> 143  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fragments of Bryodin 1

<400> 143  
Asp Ser Ala Ile Thr Thr Leu Tyr Tyr Tyr Thr Ala Ser Ser Ala  
1 5 10 15

<210> 144  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fragments of Bryodin 1

<400> 144  
Ile Thr Thr Leu Tyr Tyr Tyr Thr Ala Ser Ser Ala Ala Ser Ala  
1 5 10 15

<210> 145  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fragments of Bryodin 1

<400> 145  
Leu Tyr Tyr Tyr Thr Ala Ser Ser Ala Ala Ser Ala Leu Leu Val  
1 5 10 15

<210> 146  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fragments of Bryodin 1

<400> 146

Tyr Thr Ala Ser Ser Ala Ala Ser Ala Leu Leu Val Leu Ile Gln  
 1 5 10 15

<210> 147  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 147  
 Ser Ser Ala Ala Ser Ala Leu Leu Val Leu Ile Gln Ser Thr Ala  
 1 5 10 15

<210> 148  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 148  
 Ala Ser Ala Leu Leu Val Leu Ile Gln Ser Thr Ala Glu Ser Ala  
 1 5 10 15

<210> 149  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 149  
 Leu Leu Val Leu Ile Gln Ser Thr Ala Glu Ser Ala Arg Tyr Lys  
 1 5 10 15

<210> 150  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 150  
 Leu Ile Gln Ser Thr Ala Glu Ser Ala Arg Tyr Lys Phe Ile Glu  
 1 5 10 15

<210> 151  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 151

Ser	Thr	Ala	Glu	Ser	Ala	Arg	Tyr	Lys	Phe	Ile	Glu	Gln	Gln	Ile
1				5					10					15

&lt;210&gt; 152

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 152

Glu	Ser	Ala	Arg	Tyr	Lys	Phe	Ile	Glu	Gln	Gln	Ile	Gly	Lys	Arg
1				5					10					15

&lt;210&gt; 153

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 153

Arg	Tyr	Lys	Phe	Ile	Glu	Gln	Gln	Ile	Gly	Lys	Arg	Val	Asp	Lys
1				5					10					15

&lt;210&gt; 154

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 154

Phe	Ile	Glu	Gln	Gln	Ile	Gly	Lys	Arg	Val	Asp	Lys	Thr	Phe	Leu
1				5					10					15

&lt;210&gt; 155

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 155

Gln	Gln	Ile	Gly	Lys	Arg	Val	Asp	Lys	Thr	Phe	Leu	Pro	Ser	Leu
1				5					10					15

&lt;210&gt; 156

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 156

Gly	Lys	Arg	Val	Asp	Lys	Thr	Phe	Leu	Pro	Ser	Leu	Ala	Thr	Ile
1				5				10						15

&lt;210&gt; 157

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 157

Val	Asp	Lys	Thr	Phe	Leu	Pro	Ser	Leu	Ala	Thr	Ile	Ser	Leu	Glu
1				5				10						15

&lt;210&gt; 158

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 158

Thr	Phe	Leu	Pro	Ser	Leu	Ala	Thr	Ile	Ser	Leu	Glu	Asn	Asn	Trp
1				5				10						15

&lt;210&gt; 159

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 159

Pro	Ser	Leu	Ala	Thr	Ile	Ser	Leu	Glu	Asn	Asn	Trp	Ser	Ala	Leu
1				5				10						15

&lt;210&gt; 160

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

<400> 160  
 Ala Thr Ile Ser Leu Glu Asn Asn Trp Ser Ala Leu Ser Lys Gln  
 1 5 10 15

<210> 161  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 161  
 Ser Leu Glu Asn Asn Trp Ser Ala Leu Ser Lys Gln Ile Gln Ile  
 1 5 10 15

<210> 162  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 162  
 Asn Asn Trp Ser Ala Leu Ser Lys Gln Ile Gln Ile Ala Ser Thr  
 1 5 10 15

<210> 163  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 163  
 Ser Ala Leu Ser Lys Gln Ile Gln Ile Ala Ser Thr Asn Asn Gly  
 1 5 10 15

<210> 164  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 164  
 Ser Lys Gln Ile Gln Ile Ala Ser Thr Asn Asn Gly Gln Phe Glu  
 1 5 10 15

<210> 165  
 <211> 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 165

Ile	Gln	Ile	Ala	Ser	Thr	Asn	Asn	Gly	Gln	Phe	Glu	Ser	Pro	Val
1				5					10					15

&lt;210&gt; 166

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 166

Ala	Ser	Thr	Asn	Asn	Gly	Gln	Phe	Glu	Ser	Pro	Val	Val	Leu	Ile
1				5					10					15

&lt;210&gt; 167

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 167

Asn	Asn	Gly	Gln	Phe	Glu	Ser	Pro	Val	Val	Leu	Ile	Asp	Gly	Asn
1				5					10					15

&lt;210&gt; 168

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 168

Gln	Phe	Glu	Ser	Pro	Val	Val	Leu	Ile	Asp	Gly	Asn	Asn	Gln	Arg
1					5					10				15

&lt;210&gt; 169

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 169

Ser	Pro	Val	Val	Leu	Ile	Asp	Gly	Asn	Asn	Gln	Arg	Val	Ser	Ile
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1 5 10 15

<210> 170  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 170  
 Val Leu Ile Asp Gly Asn Asn Gln Arg Val Ser Ile Thr Asn Ala  
 1 5 10 15

<210> 171  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 171  
 Asp Gly Asn Asn Gln Arg Val Ser Ile Thr Asn Ala Ser Ala Arg  
 1 5 10 15

<210> 172  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 172  
 Asn Gln Arg Val Ser Ile Thr Asn Ala Ser Ala Arg Val Val Thr  
 1 5 10 15

<210> 173  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fragments of Bryodin 1

<400> 173  
 Val Ser Ile Thr Asn Ala Ser Ala Arg Val Val Thr Ser Asn Ile  
 1 5 10 15

<210> 174  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence



&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 174

Thr	Asn	Ala	Ser	Ala	Arg	Val	Val	Thr	Ser	Asn	Ile	Ala	Leu	Leu
1				5					10					15

&lt;210&gt; 175

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 175

Ser	Ala	Arg	Val	Val	Thr	Ser	Asn	Ile	Ala	Leu	Leu	Leu	Asn	Arg
1				5					10					15

&lt;210&gt; 176

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 176

Val	Val	Thr	Ser	Asn	Ile	Ala	Leu	Leu	Leu	Asn	Arg	Asn	Asn	Ile
1				5					10					15

&lt;210&gt; 177

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 177

Ser	Asn	Ile	Ala	Leu	Leu	Leu	Asn	Arg	Asn	Asn	Ile	Ala	Ala	Ile
1				5					10					15

&lt;210&gt; 178

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 178

Ala	Leu	Leu	Leu	Asn	Arg	Asn	Asn	Ile	Ala	Ala	Ile	Gly	Glu	Asp
1				5					10					15

&lt;210&gt; 179

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 179

Leu	Asn	Arg	Asn	Asn	Ile	Ala	Ala	Ile	Gly	Glu	Asp	Ile	Ser	Met
1			5					10					15	

&lt;210&gt; 180

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 180

Asn	Asn	Ile	Ala	Ala	Ile	Gly	Glu	Asp	Ile	Ser	Met	Thr	Leu	Ile
1			5					10					15	

&lt;210&gt; 181

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 181

Ala	Ala	Ile	Gly	Glu	Asp	Ile	Ser	Met	Thr	Leu	Ile	Gly	Phe	Glu
1			5					10					15	

&lt;210&gt; 182

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

&lt;400&gt; 182

Gly	Glu	Asp	Ile	Ser	Met	Thr	Leu	Ile	Gly	Phe	Glu	His	Gly	Leu
1			5					10					15	

&lt;210&gt; 183

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fragments of Bryodin 1

<400> 183

Ile	Ser	Met	Thr	Leu	Ile	Gly	Phe	Glu	His	Gly	Leu	Tyr	Gly	Ile
1				5					10					15